

REMARKS

Original claims 1-45 were examined. The indication of allowable subject matter in claims 10-12, 17, 19-22 and 28-30 is noted, with appreciation. Claims 27 and 30 have been amended. Accordingly, claims 1-45 are presented for reconsideration.

CLAIM OBJECTIONS

Claim 28 is objected to because the phrase "base plate" lacks antecedent basis. This deficiency has been rectified by adding to parent claim 27 the phrase "said coupler comprises a base plate."

Claim 30 is objected to because the phrase "threaded connection" lacks antecedent basis. This deficiency has been rectified by amending claim 30 so that it depends from claim 29, which does recite this phrase.

REJECTIONS BASED ON YANAGISHIMA (OFFICE ACTION, ¶¶ 3, 5, 6)

Claims 1-4, 9, 14, 15, 18, and 23-27 are rejected under 35 U.S.C. §102(b) as anticipated by Yanagishima (US 4,514,599). Claims 31-35 5-8 and 16 are rejected under 35 U.S.C. §103(a) as unpatentable over Yanagishima. Claim 13 is rejected under 35 U.S.C. §103(a) as unpatentable over Yanagishima in view of van Urk (US 2,698,917). These rejections are respectfully traversed for at least the following reasons.

Anticipation (Office Action, ¶3)

The claims at issue are directed to an "inertial exciter" (claim 1), and to a bending wave loudspeaker comprising an "inertial exciter" (claim 23). Considering the drawing reference numbers mentioned by the Examiner, it is clear that the basis for the rejection is the Fig. 8-10 embodiment of Yanagishima. However, it appears that this embodiment does *not* relate to an *inertial* exciter because "The driver assembly 549 is fixed to the bottom 551 of a driver housing 552 which is suspended from the vehicle body (not shown)." Yanagishima, col. 5, lines 37-39. Such an arrangement might look like that shown in Yanagishima's Fig. 6 embodiment, which is described using similar language: "[T]he driver housing 507 is suspended on the vehicle body from annular brackets 5011 and support members 5012."

Yanagishima, col. 4, lines 54-56. For this reason alone Yanagishima, as applied, cannot anticipate any of Applicant's claims.

Further, assuming only for the sake of argument that Yanagishima's Fig. 8-10 embodiment does have an inertial exciter, the structural arrangement disclosed therein cannot anticipate any of Applicant's claims. The italics in ¶3 of the Office Action suggest that the Examiner is interpreting the word "generally" quite broadly. However, even on such a broad interpretation, a conclusion of anticipation is not justified. Note that the "suspension" (annular resilient plate 550) in Figs. 8-10 is attached to the very end of the "massive member" (driver assembly 549, which is made up of yoke plate 553, magnet 554 and pole member 555). Accordingly, the plane of the suspension plate 550 can in no way be said to pass through the center of mass of this massive member.

Because of this arrangement in Yanagishima, there can be no "reduc[tion of] any moment acting on the suspension" as claimed by Applicant. This is evident if Figs. 8 and 10 of Yanagishima are rotated 90° so as to correspond in orientation to the view of the prior art device in Fig. 1 of this application. Assuming, again, that the Fig. 8-10 embodiment does have an inertial exciter, it can readily be seen that gravity alone would place a moment on suspension plate 50 because it is mounted at the very end of the massive driver assembly 549.

Obviousness (¶¶5,6)

In rejecting claims 5-8 and 16 as unpatentable over Yanagishima, the Examiner takes official notice of suspensions made of "thin metal plates, rubber or polymer, strengthened cloth, and cantilever type for achieving the desired elasticity and support." Office Action, ¶5. However, even if it would have been obvious to use such materials in Yanagishima's suspension, the resulting structure would not meet the limitations of these claims because, as explained above, the Fig. 8-10 embodiment relied on does not have an inertial exciter or a suspension that acts in a plane generally passing through the center of mass of the massive member, as recited in independent claim 1.

The same reasoning applies to the rejection of claim 13 over Yanagishima in view of van Urk, who discloses a particular type of magnet arrangement; and further in view of an "official notice" teaching of the use of a retentive fluid in the magnetic gap. Even if such

modifications were made to Yanagishima's Fig. 8-10 embodiment, the resulting structure still would not meet the limitations of independent claim 1, as explained.

REJECTION BASED ON FRESARD (OFFICE ACTION, ¶4)

Claims 31-35 are rejected under 35 U.S.C. §103(a) as unpatentable over Fresard (US 4,506,117). This rejection is respectfully traversed for at least the following reasons.

Independent claims 31 and 38 recite that the exciter is attached to the base plate in a "repeatedly engageable manner." The Examiner, referring to Fig. 5 of Fresard, alleges that the exciter attachment to base plate 6 is repeatedly engageable. It is assumed that the Examiner is interpreting the screws 27 of Fig. 5 as a repeatedly engageable connection. Such an interpretation is incorrect.

As explained in Fresard's col. 3, lines 3-10, screws 27 are merely "adjusting screws" that pass through an elastomer ring 10' and allow the elastic characteristics of ring 10' to be adjusted as mounting and acoustic circumstances dictate. If screws 27 were removed, the exciter would remain attached to base plate 6 by means of the elastomer ring 10' (note in Fig. 5 how the grooves in ring 10' engage flanges in each of the holes 26); and by means of "cylindrical part 7" (the coil former), which is attached, as it must be, to base plate 6 so that downward as well as upward forces can be transmitted to base plate 6 by the exciter (see the description at col. 1, lines 60-68, which applies to all embodiments – see col. 2, line 65 to col. 3, line 2). The type of connection between coil former 7 and base plate 6 is not specified, but one of ordinary skill in the art would understand that such a connection must be quite robust (e.g., a brazed connection) in order to reliably transmit vibratory energy to the base plate. That robust connection, and the grooved connection of the ring 10' with the base plate 6, simply cannot be characterized as "repeatedly engageable."

CONCLUSION

Applicant submits that the application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date February 23, 2004

FOLEY & LARDNER

Customer Number: 22428

Telephone: (202) 672-5570

Facsimile: (202) 672-5399

By Alan I. Cantor

Alan I. Cantor

Attorney for Applicant

Registration No. 28,163